# EXHIBIT 14

# Rule 8(a)(2) Claim Chart U.S. Patent No. 8,347,427 C1 ("'427 Patent") Claims 21-26, 29, 37-39, and 41

Mueller 420RDM (Remote Disconnect Meter) +
Mi.Net® LoRaWAN (LW) Meter Interface Unit (Node)
Solid State Meter (SSM)
Cellular Node Meter Interface with Mi.Net®

| 1427 D 4 4 Cl 2 24  |   |
|---|---|
| '427 Patent Claim 21  |   |
| A residential or commercial building or structure water meter comprising:   | Mueller 420 RDM with Mi.Net AMI, the Solid State Meter (SSM), the Cellular Node Meter Interface with Mi.Net®, the Solid State Meter, and the Mueller Encoder Eight (ME-8) is a component or a system the is a residential or commercial water meter   |
| a base station designed to be connected to a water supply; said base station including a housing;   | Mueller 420 RDM (electronic circuitry, battery, flow sensor and housing) and Solid State Meter (SSM) (electronic circuitry, battery, flow sensor and housing) has a base station designed to be connected to a water supply; said base station enclosed with housing.  (Exhibits C, D, E and M) and https://muellersystems.com/https://muellersystems.com/420-remotedisconnect-meter-rdm/                             |
| said base station further comprising therein:   |   |
| (a) said base station having at least one joint connector for attaching to one or more input water lines and at least one joint connector for attaching to one or more output water supplies; | Mueller 420 RDM and Mueller Solid State Meter (external straight pipe threads, see picture in Exhibit I) said base station having at least one joint connector for attaching to one or more input water lines and at least one joint connector for attaching to one or more output water supplies. (Exhibits E, I and M) and https://muellersystems.com/ https://muellersystems.com/420-remote- disconnect-meter-rdm/ |
| (b) an electrical circuitry comprising a power source and at least at least one of a CPU and microprocessor;  | Mueller 420 RDM has electrical circuitry (coated electronic board) comprising a power source (D cell lithium battery, a large lithium ion battery provides plenty of power over the life of the unit, battery life, 20 year battery life) and Mueller Solid State water meter   |

|  | (processor, battery lifetime 20 years) and at   |
|--|---|
|  | least at least one of a CPU and                 |
|  | microprocessor.                                 |
|  | (Exhibits A, B, C and M) and                    |
|  | https://muellersystems.com/                     |
|  | https://muellersystems.com/420-remote-          |
|  | disconnect-meter-rdm/                           |
| (c) display in electrical communication with   | Mueller 420 RDM has a display (permanently      |
| the electrical circuitry;                      | sealed electronic register) and Mueller Solid   |
| -  | State water meter (The SSM meter provides 8     |
|  | digits of granular data for visual reads) in    |
|  | electrical communication with the electrical    |
|  | circuitry.                                      |
|  | (Exhibits A, B and M) and                       |
|  | https://muellersystems.com/                     |
|  | https://muellersystems.com/420-remote-          |
|  | disconnect-meter-rdm/                           |
| (d) the at least one of a CPU and              | Mueller water meter 420 has at least one of a   |
| microprocessor comprising an integrated        | CPU and microprocessor comprising an            |
| memory bank or memory bank located as a        | integrated memory bank or memory bank           |
| separate memory module;                        | located as a separate memory module (2MB)       |
| separate memory module,                        | Solid-state Flash Memory for dedicated          |
|  | storage of readings) and the Mueller Solid      |
|  | State water meter ( 8-digit electronic          |
|  | reading in ACSII format where it can be         |
|  | recorded, data storage) and Mueller Mi.Net      |
|  | Node (Logs and stores 105 days of hourly        |
|  | data meter data in internal memory,             |
|  | Information retrieved from a water meter is     |
|  | , v   |
|  | stored temporarily within the Mi.Node meter     |
|  | interface unit's internal memory).              |
|  | (Exhibits K, M and N) and                       |
|  | https://muellersystems.com/                     |
|  | https://muellersystems.com/420-remote-          |
|  | disconnect-meter-rdm/                           |
| (e) the at least one of a CPU and              | Mueller 420 RDM has at least one of a CPU       |
| microprocessor can be used to monitor at       | and microprocessor can be used to monitor at    |
| least one of a water use data, water duration, | least one of a water use data, water duration,  |
| and water total volume, or selecting a         | and water total volume, or selecting a          |
| programming alarm state or setting, change     | programming alarm state (alerts, such as leak   |
| units for US or international standards and    | detection, configure individual alerts) and the |
| perform timing parameters;                     | Mueller Solid State water meter (alarms or      |
|  | consumption data) or setting, change units for  |
|  | US or international standards and perform       |
|  | timing parameters (besides consumption data,    |

|  | measures consumption data or total volume,       |
|--|--|
|  | monitor water usage).                            |
|  | (Exhibits D, G, J and M) and                     |
|  | https://muellersystems.com/                      |
|  | https://muellersystems.com/420-remote-           |
|  | disconnect-meter-rdm                             |
| (f) one or more flow rate sensors in           | Mueller 420 RDM has one or more flow rate        |
| communication with said water supply and       | sensors (nutating disc, as water enters, it      |
| electrically connected with said electrical    | moves the disc (), forcing a known volume of     |
| circuitry;                                     | water out of the meter from the opposite side    |
|  | of the disc) and the Mueller Solid State water   |
|  | meter (consumption data) in communication        |
|  | with said water supply and electrically          |
|  | connected with said electrical circuitry.        |
|  | (Exhibits E, H and M) and                        |
|  | https://muellersystems.com/                      |
|  | https://muellersystems.com/420-remote-           |
|  | disconnect-meter-rdm/                            |
| (g) one or more wireless communication         | Mueller 420 RDM one or more wireless             |
| technologies having the capability to transfer | communication technologies having the            |
| water parameter data utilizing confidential    | capability to transfer water parameter data      |
| technology from the base station to at least   | utilizing confidential technology (With          |
| one of a private, commercial, and third-party  | network security, it ensures authenticity of the |
| network to a remote offsite central            | node in the network, while the application       |
| monitoring computer;                           | layer of security ensures the network operator   |
| monitoring computer,                           | does not have access to the end user's           |
|  | application data, authentication and             |
|  | encryption are mandatory, End-to-end 128 bit     |
|  | RC4 encryption) the Mueller Solid State water    |
|  | meter ( maintained within the reporting          |
|  | structure of the AMR/AMI system) and The         |
|  | Mi.Net M Node ( <i>The various models of</i>     |
|  | Mi.Node meter interface unit allow the Mi.Net    |
|  | system to provide robust and efficient AMI,      |
|  | and water conservation solutions for all types   |
|  | of residential and commercial applications       |
|  | The Mi.Node meter interface unit's               |
|  | functionality can be upgraded remotely by        |
|  | issuing a broadcast demand. A firmware           |
|  | upgrade made over the Mi.Net system network      |
|  | allows the Mi.Node meter interface unit to be    |
|  | upgraded autonomously. All system Mi.Node        |
|  | transceivers can be scheduled for an upgrade     |
|  | at one time and the system will notify the user  |
|  | when the process is complete. The Mi.Node        |
|  | <u> </u>   |
|  | meter interface unit seamlessly connects         |

directly to the Mueller Remote Disconnect (RDM) meter for easy but secure actuation of the valve through the user interface and can be actuated in the field or through the AMI network. from the base station to at least one of a private, commercial, and third-party network to a remote offsite central monitoring computer) (picture of computer data in Exhibit G, The pilot valve can be actuated vis the user interface from any web enabled device with the proper log in and password, Field-friendly Android handheld device, picture of cell phone on pages 2, 8 and 9 of Exhibit J, deliver enhanced services through a customer portal, The Mi.Net data portal improves your service and conservation efforts an online view of their water usage using a personal computer or mobile app. The interactive portal graphically present real-time and historical usage data collected by the Mi.Net system enabling customers to: monitor water usage, configure individual alerts, identify inconsistencies that may indicate the presence of leaks) and the Mueller Solid State water meter (. . . maintained within the reporting structure of the AMR/AMI system) (Exhibits B, C, E, F, F, J, M and N) and https://muellersystems.com/ https://muellersystems.com/420-remotedisconnect-meter-rdm/ https://muellersystems.com/networkoperations-center/

the confidential technology comprising at least one of an encryption, authentication, integrity and non-repudiation technology that originates from the base station; Mueller water meter 420 and the Mueller Solid State water meter has confidential technology comprising at least one of an encryption, authentication (With network security, it ensures authenticity of the node in the network, while the application layer of security ensures the network operator does not have access to the end user's application data, ... authentication and encryption are mandatory, End-to-end 128 bit RC4 encryption), integrity and non-repudiation technology that originates from the base station.

(Exhibits B, C and M) and https://muellersystems.com/

|   | https://muellersystems.com/420-remote-          |
|---|---|
|   | disconnect-meter-rdm/                           |
|   | https://muellersystems.com/network-             |
|   | operations-center/                              |
| wherein at least one of a cell phone, mobile  | Mueller 420 RDM wherein at least one of a       |
| phone and one or more remote electronic       | cell phone, mobile phone and one or more        |
| apparatuses are capable of downloading        | remote electronic apparatuses are capable of    |
| water parameter data from the offsite central | downloading water parameter data from the       |
| monitoring computer; and,                     | offsite central monitoring computer (network    |
|   | operations center, Field-friendly Android       |
|   | handheld device, picture of computer data in    |
|   | Exhibit G, picture of cell phone on page 2, 8   |
|   | and 9 of Exhibit J, deliver enhanced services   |
|   | through a customer portal, The Mi.Net data      |
|   | portal improves your service and conservation   |
|   | efforts an online view of their water usage     |
|   | using a personal computer or mobile app. The    |
|   | interactive portal graphically present real-    |
|   | time and historical usage data collected by the |
|   | Mi.Net system enabling customers to: monitor    |
|   | water usage, configure individual alerts,       |
|   | identify inconsistencies that may indicate the  |
|   | presence of leaks) and the Mueller Solid State  |
|   | water meter ( maintained within the             |
|   | reporting structure of the AMR/AMI system)      |
|   | (Exhibits F, G, J and M) and                    |
|   | https://muellersystems.com/420-remote-          |
|   | disconnect-meter-rdm/                           |
|   | https://muellersystems.com/network-             |
|   | operations-center/                              |

the base station having a unique identification method comprising at least one or more characters, numbers, and symbols that is visually observable on the base station or in the software that [can be] is at least one of a MAC address, Universal Unique Identifier (UUID), TCP/IP address, DNS name, owner's email address, serial number, or an unique string of characters issued by a municipal or governmental agency.

Mueller 420 RDM includes a base station having a unique identification method comprising at least one or more characters, numbers, and symbols that is visually observable on the base station or in the software that is at least one of a MAC address, Universal Unique Identifier (UUID), TCP/IP address, DNS name, owner's email address, serial number, or an unique string of characters issued by a municipal or governmental agency (model and NSF-61 designation are permanently cast into the body components) and the Mueller Solid State water meter (A unique, never duplicated 8digit serial number on the SSM meter faceplate and lid identifies it as the basis for all systems communication) (Exhibit H and M) and https://muellersystems.com/420-remotedisconnect-meter-rdm/ https://muellersystems.com/networkoperations-center/

# '427 Patent Claim 22

The residential or commercial building or structure water meter of claim 21, wherein said at least one of a remote display and recording apparatus, remote computer, cell phone and mobile phone, can retrieve at least one of a water use and a water quality data over at least one of the internet cell tower, third party network and private network from the offsite central computer monitoring station.

Mueller 420 RDM at least one of a remote display and recording apparatus, remote computer, cell phone (the presence of leaks) and mobile phone, can retrieve at least one of a water use (measure water consumption or total volume) and a water quality data over at least one of the internet cell tower, third party network and private network from the offsite central computer monitoring station (Fieldfriendly Android handheld device, picture of computer data in Exhibit G, picture of cell phone on page 2, 8 and 9 of Exhibit J, deliver enhanced services through a customer portal, The Mi.Net data portal improves your service and conservation efforts an online view of their water usage using a personal computer or mobile app. The interactive portal graphically present real-time and historical usage data collected by the Mi.Net system enabling customers to: monitor water usage, configure individual alerts, identify inconsistencies that may indicate the presence of leaks) the Mueller Solid State water meter (The SSM meter provides 8 digits of granular data for visual reads and 8 digits in encoded electronic format for use in Mueller Mi.Net AMR/AMI applications, When interrogated by a Mueller AMR/AMI device, the SSM meter communicates the unique 8-digit serial number and 8-digit electronic reading in ACSII format where it can be recorded and maintained within the reporting structure of the AMR/AMI system) (Exhibits F, G, J and M) and https://muellersystems.com/420-remote-disconnect-meter-rdm/https://muellersystems.com/network-operations-center/

# '427 Patent Claim 23

The residential or commercial building or structure water meter of claim 21, at least one of a remote display and recording apparatus, remote computer, and cell phone or mobile phone for remote monitoring by at least one of a residential user, commercial occupier, and municipal or governmental agency.

Mueller 420 RDM includes at least one of a remote display and recording apparatus, remote computer, and cell phone (Fieldfriendly Android handheld device, picture of computer data in Exhibit 7, picture of cell phone on pages 2, 8 and 9 of Exhibit 10, deliver enhanced services through a customer portal, The Mi.Net data portal improves your service and conservation efforts an online view of their water usage using a personal computer or mobile app. The interactive portal graphically present real-time and historical usage data collected by the Mi.Net system enabling customers to: monitor water usage, configure individual alerts, identify inconsistencies that may indicate the presence of leaks) and the Mueller Solid State water meter (The SSM meter provides 8 digits of granular data for visual reads and 8 digits in encoded electronic format for use in Mueller Mi.Net AMR/AMI applications, When interrogated by a Mueller AMR/AMI device, the SSM meter communicates the unique 8digit serial number and 8-digit electronic reading in ACSII format where it can be recorded and maintained within the reporting structure of the AMR/AMI system) or mobile phone for remote monitoring by at least one of a residential user, commercial occupier, and

municipal or governmental agency (network operations center, deliver enhanced services through a customer portal, The Mi.Net data portal improves your service and conservation efforts an online view of their water usage using a personal computer or mobile app. The interactive portal graphically present realtime and historical usage data collected by the Mi.Net system enabling customers to: monitor water usage, configure individual alerts, identify inconsistencies that may indicate the presence of leaks). (Exhibits F, G, J and M) and https://muellersystems.com/420-remotedisconnect-meter-rdm/ https://muellersystems.com/networkoperations center/

# '427 Patent Claim 24

The residential or commercial building or structure water meter of claim 21, further comprising one of more water control valve mechanisms that are controlled by at least one of a CPU and microprocessor instructions.

Mueller 420 RDM includes one of more water control valve mechanisms that are controlled by at least one of a CPU and microprocessor instructions (...Remote Disconnect Meter to enable remote valve actuation, seamlessly connects directly to the Mueller Model 420 Remote Disconnect Meter (RDM) for easy and secure valve actuation through the Sentrix<sup>tm</sup> user interface, remote disconnect enabled compatibility, compatible with Mueller 420 RDM water utilities initiate a command to turn service on or off, remote disconnect valves to shut off the water service, the pilot valve can be actuated vis the user interface from any web enabled device with the proper log in and password, enables water utilities to remotely connect or disconnect water services, water service can be connected or disconnected).

(Exhibits A, B, C, D, E and F) and https://muellersystems.com/ https://muellersystems.com/420-remote-disconnect-meter-rdm/

# '427 Patent Claim 25

The residential or commercial building or structure water meter of claim 21, wherein said confidential technology utilizes encryption technology to securely provide water parameter information or data in a confidential format.

Mueller 420 RDM said confidential technology utilizes encryption technology to securely provide water parameter information or data in a confidential format (*With network security, it ensures authenticity of the node in the network, while the application layer of security ensures the network operator does not have access to the end user's application data, ...authentication and encryption are mandatory, End-to-end 128 bit RC4 encryption*).

(Exhibits B and C) and https://muellersystems.com/420-remote-

disconnect-meter-rdm/

#### '427 Patent Claim 26

The residential or commercial building or structure water meter of claim 21, wherein said confidential technology utilizes authentication procedures to ensure that transferred, uploaded, or downloaded information and/or data, communicated to an intended water meter.

Mueller 420 RDM said confidential technology utilizes authentication procedures to ensure that transferred, uploaded, or downloaded information and/or data, communicated to an intended water meter (With network security, it ensures authenticity of the node in the network, while the application layer of security ensures the network operator does not have access to the end user's application data, authentication and encryption are mandatory). (Exhibits B and C) and https://muellersystems.com/https://muellersystems.com/420-remotedisconnect-meter-rdm/

# '427 Patent Claim 29

The residential or commercial building or structure water meter of claim 21, wherein said one or more wireless communication technologies can transmit water parameter data or information to an offsite monitoring central station or private network with remote computer, cell phone or mobile phone on a Mueller 420 RDM said one or more wireless communication technologies can transmit water parameter data or information to an offsite monitoring central station or private network with remote computer, cell phone or mobile phone on a frequency of at least once per minute, once per hour, once per day, per

| frequency of at least once per minute, once per hour, once per day, per month, and per year.  | month, and per year (will transmit hourly meter data at a predetermine time one per day), on-demand reads to the node can be requested and delivered with seconds), (Exhibits A and B) and https://muellersystems.com/ https://muellersystems.com/420-remotedisconnect-meter-rdm/  |
|---|--|
| '427 Patent Claim 37  The residential or commercial building or structure water meter of claim 21, wherein said wireless communication technologies has a frequency in the range of 902 MHz to 928 MHz  | Mueller 420 RDM said wireless communication technologies has a frequency in the range of 902 MHz to 928 MHz (902 MHz to 928 MHz, Mi.Net System operates in the 900 MHz band).  (Exhibits A, C, D, K and L) and https://muellersystems.com/https://muellersystems.com/420-remotedisconnect-meter-rdm/   |
| '427 Patent Claim 38  The residential or commercial building or structure water meter of claim 21, wherein said wireless communication technologies is in a frequency range of 902 MHz to 928 MHz that transfers at least one of a water use, water energy use, and water quality data to at least one of a private, commercial, and third-party network, | Mueller 420 RDM with Mi.Net AMI utilizes the 902-928 MHz wireless technology (902 MHz to 928 MHz, Mi.Net System operates in the 900 MHz band) to transfer water use to at least one of a private, commercial or third-party network (network operations center, deliver enhanced services through a customer portal, The Mi.Net data portal improves your service and conservation efforts an online view of their water usage using a personal computer or mobile app. The interactive portal graphically present real-time and historical usage data collected by the Mi.Net system enabling customers to: monitor water usage, configure individual alerts, identify inconsistencies that may indicate the presence of leaks).  (Exhibits A, B, C, D, G, H, J, K and L) and https://muellersystems.com/https://muellersystems.com/420-remotedisconnect-meter-rdm/ |

# '427 Patent Claim 39

The residential or commercial building or structure water meter of claim 21, wherein said one or more wireless communication technologies is a cellular technology.

The Mueller Cellular Node allows water utilities to connect meters to their AMI network where radio communication is not feasible or cost effective. This Network-as-a Service (NaaS) endpoint solution communicates with encoded water meters, including meters that are already in operation; Like other Mueller nodes, the Cellular Node feeds consumption data directly to the Sentryx Water Intelligence Platform which provides utilities with a holistic view and insights into the health of their distribution systems including pressure, consumption and leak detection; Connecting the Cellular Node to a positive displacement, solid state meter, electromagnetic flow meter, or other encoded meter, allows usage and flow data to be monitored 24/7 and obtained quickly without the operational burden of setting up and maintaining the system infrastructure. Data parsed through the Sentryx algorithm are converted into valuable insights for utilities to take preventive actions on their systems.

# '427 Patent Claim 41

The residential or commercial building or structure water meter of claim 21, wherein said one or more wireless communication technologies is at least one of a cellular technology, Wi-Fi technology, IEEE 802.15.4 format, Zigbee, Z-Wave, Bluetooth technology, a radio frequency in the range of 902 MHz to 928 MHz, and an Industrial, Scientific, and Medical (ISM) band 1n the range of 6.765 MHz to 245 GHz.

Mueller 420 RDM is at least one of a cellular technology, Wi-Fi technology, IEEE 802.15.4 format, Zigbee, Z-Wave, Bluetooth technology, a radio frequency in the range of 902 MHz to 928 MHz, (902 MHz to 928 MHz, Mi.Net System operates in the 900 MHz band) and an Industrial, Scientific, and Medical (ISM) band 1n the range of 6.765 MHz to 245 GHz.

(Exhibits 1, 2, 3, 4, 11 and 12) and https://muellersystems.com/ https://muellersystems.com/420-remote-disconnect-meter-rdm/